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STUDIES

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ACCOUNTING FOR CONGENITAL MALFORMATIONS IN NORTH CAROLINA

by

Peggy D. Campbell

ABSTRACT

North Carolina death certificate data were utilized to provide a general description of mortality due to congenital malformations. A similar examination of the incidence of malformations among North Carolina births began with an assessment of the completeness of reporting malformations on birth certificates. Birth certificate data for 1980 were compared with newborn records from the 1980 hospital discharge data. It was found that North Carolina birth certificates reflected only about 20 percent of the congenital anomalies cited on the hospital discharge records of newborns in 1980. This suggests a strong need for developing a more complete system of reporting malformations among North Carolina's live births.

Introduction

Congenital malformations are a focus of concern in the public health and medical communities due in part to their ranking as a leading cause of infant mortality. Such anomalies were listed as the underlying cause for the deaths of 335 North Carolinians in 1982. Over 70 percent of these were persons under one year of age.

Beyond the mortality issue there are also ongoing medical, social, and economic implications associated with birth defects in relation to childhood morbidity. These long-term effects stem from the medical and physical handicaps which frequently accompany serious anomalies.

For the purposes of the present study, a congenital malformation is defined as "an abnormal condition that exists at (or usually before) birth and results from a hereditary defect, an environmental agent, or the interaction of both." (5) This research has been confined to analysis of codes 740-759 of the International Classification of Diseases (9th revision) and excludes birth injuries and other complications of pregnancy.

The causes of congenital anomalies are of increasing epidemiologic interest, especially with the introduction of numerous new drugs and chemicals into the environment, many of which may have teratogenic potential. Effective research into the causes of birth defects necessitates accurate reporting of their occurrence. While a reasonably good picture of deaths due to these causes can be obtained using data supplied on death certificates, there is considerable question as to whether official birth records provide an adequate accounting of the incidence of malformations among live births. (5,9)

It is this latter question which is a primary concern in this paper. The purposes of this report are to describe the reported incidence of congenital malformations among the births and deaths of North Carolina residents, examine the completeness of reporting anomalies on birth certificates, and assess the usefulness of these data for monitoring and epidemiologic research.